Unit 5
Day 8
Review Class

We will approach these problems as if you have 3 minutes to finish each problem. I will give you 1 minute to strategize and then we will finish it together.

1) $x^7 - 64x$

$x(x^6 - 64)$

$x(x^3 + 8)(x^3 - 8)$

$x(x+2)(x^2-2x+4)(x-2)(x^2+2x+4)$

2) $x^4 + 2x^2 + 9$

$(x^4 + 6x^2 + 9) - 4x^2$

$(x^2+3)^2 - 4x^2$

$[(x^2+3) - 2x][(x^2+3) + 2x]$

$(x^2-2x+3)(x^2+2x+3)$

~~(x^2+3-2x)~~

3) $(2ax + 3a) + (2bx + 3b) + (2cx + 3c)$

$a(2x+3) + b(2x+3) + c(2x+3)$

$(2x+3)(a+b+c)$

4)

$4x^2 - 25a^2 + 4xy + y^2 + 10ab - b^2$

$(4x^2 + 4xy + y^2) + (-25a^2 + 10ab - b^2)$

$(4x^2 + 4xy + y^2) + -(25a^2 - 10ab + b^2)$

$(2x+y)^2 - (5a-b)^2$

$[(2x+y) - (5a-b)][(2x+y) + (5a-b)]$

$(2x+y-5a+b)(2x+y+5a-b)$

Factor over real and complex.

5) $5x^3 - 12x$

Factor over real and complex.

6) $x^4 - 25$